

REMARKS-General

1. The amended independent claim 1 incorporates all structural limitations of the original claim 1 and includes further limitations previously brought forth in the disclosure. No new matter has been included. All claims 1-2 are submitted to be of sufficient clarity and detail to enable a person of average skill in the art to make and use the instant invention, so as to be pursuant to 35 USC 112.

Regarding to Rejection of Claim 1 under 35USC102

2. The Examiner rejected claim 1 as being anticipated by Nishihashi et al (US 5,038,255). Pursuant to 35 U.S.C. 102, "a person shall be entitled to a patent unless:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.

3. In view of 35 U.S.C. 102(b), it is apparent that a person shall not be entitled to a patent when his or her invention was patent in this country more than one year prior to the date of the application for patent in the United States.

4. However, the Nishihashi patent and the instant invention are not the same invention according to the fact that the independent claims of the Nishihashi patent do not read upon the instant invention and the independent claim 1 of the instant invention does not read upon the Nishihashi patent too. Apparently, the instant invention, which discloses a light source arrangement for radially projecting light, should not be the same invention as the Nishihashi patent which discloses a vehicle lamp using LEDs.

5. Accordingly, Nishihashi fails to anticipate the distinctive features of the instant invention as follows:

(i) In claim 1, "a supporting frame having a dissipating end" is claimed for heat dissipation, wherein Nishihashi merely teaches, in column 3, lines 38-40, a housing 2 has a heat conductivity improved or raised by adding a particular filler thereto without any mention of any dissipating end of the supporting frame. Accordingly, the supporting

frame is made of good heat conduction material to guide the heat to the dissipating end thereof.

(ii) In claim 1, "the supporting frame having a peripheral surface at an outer surrounding surface" is claimed, wherein Nishihashi merely teaches the housing 2 for the LEDs 5A housing therein. The applicant respectfully submits that the supporting frame of the instant invention is totally different from the housing 2 of Nishihashi. The housing 2 of Nishihashi has a cavity for the LEDs 5A receiving therein and a lens 3 mounted to the housing 2 to enclose the LEDs 5A. However, the supporting frame of the instant invention has no cavity and lens. As it is mentioned in the specification, page5, lines 14-22, the supporting frame can have an elongated solid member, a circular cross section, triangular cross section, rectangular cross section, or polygonal cross section to define the peripheral surface at the outer surrounding surface. In other words, the structural configuration of the supporting frame is not equivalent to the housing 2 of the Nishihashi and is resulted in different structural features.

(iii) In claim 1, "a circuit provided on the peripheral surface of the supporting frame" is claimed, wherein Nishihashi merely teaches a circuit pattern 41 formed on a light source fixing face 2A of the housing 2. It is apparent that Nishihashi fails to anticipate the circuit pattern 41 is formed at the outer surrounding surface of the housing 2.

(iv) In claim 1, "a luminary element is electrically connecting to the circuit at the outer surrounding surface of the supporting frame" for radially emitting light with respect to the supporting frame. Nishihashi merely teaches the LEDs 5A mounted to the circuit pattern 41 within the housing 2.

(v) In claim 1, "the luminary element emits light in a radial direction with respect to the supporting frame" is claimed, wherein the LEDs 5A of Nishihashi merely emit light towards the lens. In other words, the light head of the instant invention provides a 360 degrees light emission because the luminary element is mounted on the peripheral surface of the supporting frame.

(vi) In claim 1, "the supporting frame is adapted for transmitting and dissipating heat from the luminary element at the dissipating end" is claimed for preventing the luminary element being overheated, wherein Nishihashi merely teaches

the film-like substrate 4 applied to the inner face of the housing to conduct the heat from the light source fixing face 2A to the outer face 2B of the housing 2. The applicant respectfully submits that the supporting frame itself transmits and dissipates heat from the luminary element without any film-like substrate. In addition, the supporting frame is adapted to guide the heat from the peripheral surface to the dissipating end but not from one side to another side.

6. Accordingly, Nishihashi et al is not a qualified prior art of the instant invention and should be removed from the prior art list of the instant invention.

Response to Rejection of Claims 1-2 under 35USC103

7. The Examiner rejected claims 1-2 over Ruskouski (US 5,655,830) in view of Begemann (US 6,220,722). Pursuant to 35 U.S.C. 103:

“(a) A patent may not be obtained though the invention is **not identically** disclosed or described as set forth in **section 102 of this title**, if the **differences** between the subject matter sought to be patented and the prior art are such that the **subject matter as a whole would have been obvious** at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.”

8. In view of 35 U.S.C. 103(a), it is apparent that to be qualified as a prior art under 35USC103(a), the prior art must be cited under 35USC102(a)~(g) but the disclosure of the prior art and the invention are not identical and there are one or more differences between the subject matter sought to be patented and the prior art. In addition, such differences between the subject matter sought to be patented **as a whole** and the prior art are obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains.

9. In other words, the differences between the subject matter sought to be patent as a whole of the instant invention and Ruskouski which is qualified as prior art of the instant invention under 35USC102(b) are obvious in view of Begemann at the time the

invention was made to a person having ordinary skill in the art to which the subject matter pertains.

10. The applicant respectfully submits that in order to determine whether the differences between the subject matters sought to be patent as a whole of the instant invention and the primary prior art, Ruskouski, are obvious in view of the supplemental cited art, Begemann, we have to identify all the differences between the claims of the instant inventions and Ruskouski. The applicant respectfully identifies the differences between the claims of the instant invention and Ruskouski as follows:

(a) In claim 1, "a supporting frame having a dissipating end" is claimed for heat dissipation, wherein Ruskouski merely teaches a tube 22 made of glass or plastic material having an interior cavity and a vent hole 33 for heat dissipation and/or ventilation. Accordingly, the supporting frame of the instant invention is made of good heat conduction material to guide the heat to the dissipating end thereof. However, the tube 22 of Ruskouski is made of glass or plastic material to receive the PCB therein for dissipating the heat from the PCB through the vent hole 33 by convection.

(b) In claim 1, "the supporting frame having a peripheral surface at an outer surrounding surface" is claimed, wherein Ruskouski merely teaches the light emitting diode 100 mounted on the PCB. Accordingly, the PCB is not made of good heat conduction material for heat dissipation. In addition, the PCB does not have any outer surrounding surface for the luminary element mounting thereon. As it is mentioned above, the supporting frame can have an elongated solid member, a circular cross section, triangular cross section, rectangular cross section, or polygonal cross section to define the peripheral surface at the outer surrounding surface. In other words, the structural configuration of the supporting frame is not equivalent to the PCB of the Ruskouski and is resulted in different structural features.

(c) In claim 1, "a circuit provided on the peripheral surface of the supporting frame" is claimed, wherein Ruskouski merely teaches the light emitting diode 100 mounted on the PCB. It is apparent that Ruskouski fails to teach the circuit is provided at the outer surrounding surface of the supporting frame.

(d) In claim 1, "a luminary element is electrically connecting to the circuit at the outer surrounding surface of the supporting frame" for radially emitting light with

respect to the supporting frame. Ruskouski merely teaches the light emitting diode 100 emits light through the tube. It is worth to mention that the instant invention does not require any tube having the vent hole to dissipate the heat from the luminary element. The supporting frame itself can transmit and dissipate the heat from the luminary element.

(e) In claim 1, "the luminary element emits light in a radial direction with respect to the supporting frame" is claimed, wherein the light emitting diode 100 of Ruskouski merely emit light towards the tube. In other words, the light head of the instant invention provides a 360 degrees light emission because the luminary element is mounted on the peripheral surface of the supporting frame.

(f) In claim 1, "the supporting frame is adapted for transmitting and dissipating heat from the luminary element at the dissipating end" is claimed for preventing the luminary element being overheated, wherein Ruskouski merely teaches the tube having the vent hole for heat dissipation and/or ventilation.

Accordingly, Ruskouski merely teaches the PCB with the light emitting diode 100 is received in the tube to form the lighting device, wherein the heat from the light emitting diode 100 is vented through the vent hole of the tube. No matter what kind of material is made for the PCB, the heat is accumulated within the tube. Therefore, the tube will be getting hotter and hotter and the light emitting diode 100 will be overheated over a period of continued use. The instant invention provides the supporting frame to guide the heat from the luminary element to the dissipating end of the supporting frame to prevent the luminary element from being overheated. In other words, the supporting frame of the instant invention not only supports the luminary element on the peripheral surface but also transmit the heat away from the luminary element so as to form the light head to provide a 360 degrees light emission. Ruskouski fails to teach such concept.

(g) Ruskouski does not mention the "the luminary element is a single bonded diode" mounted on the peripheral surface of the supporting frame as claimed in claim 2 in addition to what is claimed in claim 1 as a whole. Ruskouski merely teaches the light emitting diode is mounted on the PCB and is received within the tube.

11. Whether the claims 1 to 2 as amended of the instant invention are obvious depends on whether the above differences (a) to (g) between the instant invention and Ruskouski are obvious in view of Begemann at the time of the invention was made.

12. Furthermore, the applicant respectfully submits that when applying 35 USC 103, the following tenets of patent law must be adhered to:

- (a) The claimed invention must be considered as a whole;
- (b) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (c) The references must be viewed without the benefit of hindsight vision afforded by the claimed invention; and
- (d) Reasonable expectation of success is the standard with which obviousness is determined.

Also, "The mere fact that a reference could be modified to produce the patented invention would not make the modification obvious unless it is suggested by the prior art." Libbey-Owens-Ford v. BOC Group, 4 USPQ 2d 1097, 1103 (DCNJ 1987).

13. Begemann merely teaches a LED lamp having a substrate 3 made of metal or a metal ally, thereby enabling a good heat conduction from the LED to the gear column to be achieved. Accordingly, the substrate taught by Begemann is used to electrically connect to the LED but not the single bonded diode. The structural and electrical configuration of the LED is different from the single bonded diode. The substrate of Begemann may not be capable of incorporating with the single bonded diode. Even though the substrate of Begemann is used as the PCB of Ruskouski, the heat from the light emitting diode is still trapped within the tube of Ruskouski. A mere recitation of the vent hole cannot effectively dissipate the heat from the light emitting diode. In addition, neither Ruskouski nor Begemann suggests a light source arrangement containing the above distinctive features (a) to (g) as claimed in the instant invention as well as any combination or possibility of providing a supporting frame supporting the luminary element at the surrounding surface to provide a 360 degree light emission and

dissipating the heat from the luminary element to the dissipating end of the supporting frame to prevent the luminary element from being overheated.

14. “To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited art references for combination in the manner claimed... [T]he suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness...” *In re Gorman*, 933 F.2d 982, 986, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991).

15. Accordingly, the applicant believes that neither Ruskouski nor Begemann, separately or in combination, suggests or makes any mention whatsoever of the difference subject features (a) to (g) as claimed in the amended claims 1 to 2 of the instant invention.

16. Accordingly, applicant believes that the rejection of claims 1-2 is improper and should be withdrawn.

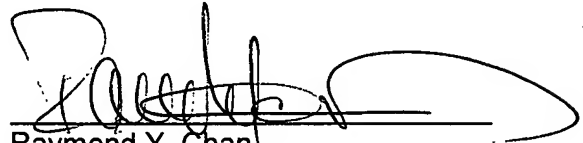
The Cited but Non-Applied References

17. The cited but not relied upon references have been studied and are greatly appreciated, but are deemed to be less relevant than the relied upon references.

18. In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the objection are requested. Allowance of claims 1-2 at an early date is solicited.

19. Should the Examiner believe that anything further is needed in order to place the application in condition for allowance, he is requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,

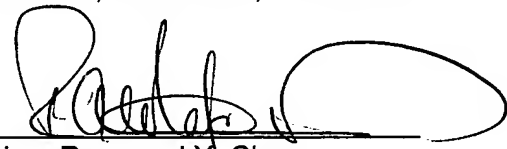


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Person Signing: Raymond Y. Chan